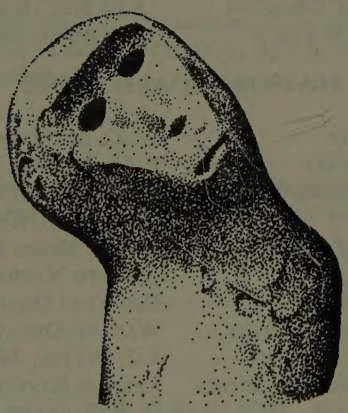
PRIMATES

A JOURNAL OF PRIMATOLOGY

Vol. 27 1986



PUBLISHED QUARTERLY BY

JAPAN MONKEY CENTRE

PRIMATES A JOURNAL OF PRIMATOLOGY

FOUNDED 1957

PRIMATES is an international journal of primatology, whose general object is to provide facilities for the elucidation of the entire aspect of primates in connection with man. It publishes original papers that contribute to the development of the scientific study of primates and its scope embraces work in all fields of investigation, such as morphology, physiology, psychology, behavior, ecology, sociology, systematics, evolution, laboratory primate medicine, etc. In addition to original papers, brief notes, research reports and review articles are included.

PRIMATES is published quarterly, and four numbers form one volume.

Persons who wish to contribute are advised to study the *Information for Contributors* printed inside the back cover and to follow the requested procedure carefully.

EDITORIAL BOARD 1984–86

Chief Editor: MASAO KAWAI, *Kyoto University*

Editors:

AKIYOSHI EHARA, *Kyoto University*
NAOSUKE ITOIGAWA, *Osaka University*
MITSUO IWAMOTO, *Kyoto University*
KOSEI IZAWA, *Miyagi Univ. of Education*
KIYOKO MUROFUSHI, *Kyoto University*
HIDEO NIGI, *Nippon Veterinary & Zootechnical College*
TOSHISADA NISHIDA, *The Univ. of Tokyo*
KEN NOZAWA, *Kyoto University*
YUKIMARU SUGIYAMA, *Kyoto University*

ADVISORY BOARD 1985–86

TOSHIO ASANO, *Kyoto University*
TOMOO ENOMOTO, *Tokai University*
GLENN HAUSFATER, *Univ. of Missouri, Columbia*
SHIGEO HONJO, *N.I.H., Tokyo*
SARAH BLAFFER HRDY, *Univ. of California, Davis*
JUNICHIRO ITANI, *Kyoto University*
TOSHITAKA IWAMOTO, *Miyazaki University*
TAKAYOSHI KANO, *Univ. of the Ryukyus*
KENJI KAWANAKA, *Okayama Univ. of Science*
NAOKI KOYAMA, *Kyoto University*
WILLIAM A. MASON, *Univ. of California, Davis*
W. C. MCGREW, *University of Stirling*
E. W. MENZEL, JR., *State Univ. of New York*
TETSUHIRO MINAMI, *Osaka University*
AKIO MORI, *Kyoto University*
UMEYO MORI, *Kyoto University*
AKISATO NISHIMURA, *Doshisha University*
HIDEYUKI OHSAWA, *Kyoto University*
WATARU OHSAWA, *Kinki University*
J.-J. PETTER, *Muséum de Paris*
VERNON REYNOLDS, *University of Oxford*
G. P. SACKETT, *University of Washington*
CHRISTIAN VOGEL, *Universität Göttingen*

Contributions, materials for announcement, and new books for review should be sent to:

Dr. MASAO KAWAI, Chief Editor, PRIMATES
c/o Japan Monkey Centre, Inuyama, Aichi, 484 Japan

The annual subscription price including postage: Inland, ¥30,000 for institutions, ¥20,000 for individuals; abroad, US$150.00 for institutions, US$100.00 for individuals. As to the prices of back issues, please send inquiries to the Editorial Office. Subscription orders, remittances, and business correspondence should be addressed to:

PRIMATES, Editorial Office
Japan Monkey Centre, Inuyama, Aichi, 484 Japan

Published by JAPAN MONKEY CENTRE, Inuyama, Aichi, Japan, 1986 ©
Director: WATARU OHSAWA
Printed by KUZO DOGURA, Kyoto

CONTENTS

No. 1, January 1986

UEHARA, SHIGEO: Sex and Group Differences in Feeding on Animals by Wild Chimpanzees in the Mahale Mountains National Park, Tanzania 1

ANDERSON, CONNIE M.: Predation and Primate Evolution 15

HARCOURT, CAROLINE S. and LEANNE T. NASH: Species Differences in Substrate Use and Diet Between Sympatric Galagos in Two Kenyan Coastal Forests 41

HORWICH, ROBERT H. and EDWIN D. JOHNSON: Geographic Distribution of the Black Howler (*Alouatta pigra*) in Central America 53

ANDERSON, JAMES R. and ARNOLD S. CHAMOVE: Infant Stumptailed Macaques Reared with Mirrors or Peers: Social Responsiveness, Attachment, and Adjustment 63

WALLIS, JANETTE, BARBARA J. KING, and CHRISTIAN ROTH-MEYER: The Effect of Female Proximity and Social Interaction on the Menstrual Cycle of Crab-eating Monkeys (*Macaca fascicularis*) 83

WOLFE, LINDA D.: Reproductive Biology of Rhesus and Japanese Macaques 95

HAYASAKA, KENJI, YOSHI KAWAMOTO, TAKAYOSHI SHOTAKE, and KEN NOZAWA: Probability of Paternity Exclusion and the Number of Loci Needed to Determine the Fathers in a Troop of Macaques 103

INAGAKI, HARUHISA: Morphological Characteristics of the Hair of Japanese Monkeys (*Macaca fuscata fuscata*): Length, Diameter, and Shape in Cross-section, and Arrangement of the Medulla 115

Research Report

MATSUBAYASHI, KIYOAKI, SHUNJI GOTOH, and JURI SUZUKI: Changes in Import of Nonhuman Primates After Ratification of CITES (Washington Convention) in Japan 125

Book Reviews 137

No 2, April 1986

EATON, G. GRAY, DEANNE F. JOHNSON, BARBARA B. GLICK, and JULIE M. WORLEIN: Japanese Macaque (*Macaca fuscata*) Social Development: Sex Differences in Juvenile Behavior 141

KUNKUN, JAKA GURMAYA: Ecology and Behavior of *Presbytis thomasi* in Northern Sumatra 151

BARTECKI, URSULA: The Social Position of Male Barbary Macaques (*Macaca sylvanus*) in a Semifree-ranging Population 173

JATNA, SUPRIATNA, BARITA OLOAN MANULLANG, and ENDANG SOEKARA: Group Composition, Home Range, and Diet of the Maroon Leaf Monkey (*Presbytis rubicunda*) at Tanjung Puting Reserve, Central Kalimantan, Indonesia 185

JOHNSON, RODNEY L.: Mother-infant Contact and Maternal Maintenance Activities Among Free-ranging Rhesus Monkeys 191
GORE, MAUVIS A.: Mother-offspring Conflict and Interference at Mother's Mating in *Macaca fascicularis* 205
ARRUDA, MARIA DE FÁTIMA, MARIA EMÍLIA YAMAMOTO, and ORLANDO F. A. BUENO: Interactions Between Parents and Infants, and Infants-father Separation in the Common Marmoset (*Callithrix jacchus*) 215
WU, HANNAH M., GENE P. SACKETT, and VIRGINIA M. GUNDERSON: Social Stimuli as Incentives for Delayed Response Performance by Infant Pigtailed Macaques (*Macaca nemestrina*) 229
SUEN, HOI K.: On the Utility of a *Post Hoc* Correction Procedure for One-zero Sampling Duration Estimates 237
NOGAMI, YASUO and MASAHITO NATORI: Fine Structure of the Dental Enamel in the Family Callitrichidae (Ceboidea, Primates) 245
SCOTT, ROBIN, STEPHEN ANYAIBE, ANTONY YANCEY, and VERLE HEADINGS: Fetal Hemoglobin Distributions Among Adult Baboon and Macaque Species 259

Book Reviews 269

No. 3, July 1986

YAMAGIWA, JUICHI: Activity Rhythm and the Ranging of a Solitary Male Mountain Gorilla (*Gorilla gorilla beringei*) 273
FUJITA, KAZUO and TETSURO MATSUZAWA: A New Procedure to Study the Perceptual World of Animals with Sensory Reinforcement: Recognition of Humans by a Chimpanzee 283
AZIZ, M. ASHRAF and SAMUEL STRONG DUNLAP: The Human Extensor Digitorum Profundus Muscle with Comments on the Evolution of the Primate Hand 293
NATORI, MASAHITO: Interspecific Relationships of *Callithrix* Based on the Dental Characters 321
CROMPTON, ROBIN HUW and PATRICK MAHEDI ANDAU: Locomotion and Habitat Utilization in Free-ranging *Tarsius bancanus*: A Preliminary Report 337
HARIHARA, SHINJI, NAOMI AOTO, MOMOKI HIRAI, KEIJI TERAO, FUMIAKI CHO, SHIGEO HONJO, and KEIICHI OMOTO: Polymorphism in the Mitochondrial DNA of Cynomolgus Monkeys 357
SAMPAIO, MARIA IRACILDA DA CUNHA, MARIA PAULA CRUZ SCHNEIDER, FRANCISCO MAURO SALZANO, and CARMEN MARIA LEITAO BARROSO: Esterase D and Carbonic Anhydrase 2 in a Natural Population of *Cebus apella* from Brazil 363
NAKAKUKI, SHOICHI: The Bronchial Tree and Blood Vessels of the Japanese Monkey Lung 369

Short Communication

CHAPMAN, COLIN and LAUREN J. CHAPMAN: Behavioural Development of Howling Monkey Twins (*Alouatta palliata*) in Santa Rosa National Park, Costa Rica 377

Research Report

MASUI, KEN'ICHI, YOSHINORI NARITA, and SUSUMU TANAKA: Information on the Distribution of Formosan Monkeys (*Macaca cyclopis*) 383

Book Reviews 393

No. 4, October 1986

MITANI, MASAZUMI: Voiceprint Identification and Its Application to Sociological Studies of Wild Japanese Monkeys (*Macaca fuscata yakui* 397

HUFFMAN, MICHAEL A. and DUANE QUIATT: Stone Handling by Japanese Macaques (*Macaca fuscata*): Implications for Tool Use of Stone 413

HILL, DAVID A.: Social Relationships Between Adult Male and Immature Rhesus Macaques 425

IDANI, GENICHI: Seed Dispersal by Pygmy Chimpanzees (*Pan paniscus*): A Preliminary Report 441

STELZNER, JEFFREY and GLENN HAUSFATER: Posture, Microclimate, and Thermoregulation in Yellow Baboons 449

FRIEDL, K. E. and W. N. HOLMES: The Effect of Relative Humidity on Osmoregulation in the Squirrel Monkey (*Saimiri sciureus*) 465

HAMADA, YUZURU, MITSUO IWAMOTO, and TSUYOSHI WATANABE: Somatometrical Features of Japanese Monkeys in the Koshima Islet: In Viewpoint of Somatometry, Growth, and Sexual Maturation 471

FERGUSON, WALTER W.: The Taxonomic Status of *Praeanthropus africanus* (Primates: Pongidae) from the Late Pliocene of Eastern Africa 485

SHAIKH, A. A., E. E. GBUR, and S. A. SHAIKH: Concentrations of Steroids in the Utero-ovarian Vein Blood, Serially Collected from the Two Sides of Individual Baboons, During the Follicular Phase 493

KIRBY, D. A. and J. A. HERD: Effect of Naloxone on Renal Responses to Noxious Stimuli in the Cynomolgus Monkey 507

Short Communication

TAKASAKI, HIROYUKI, MARIKO HIRAIWA-HASEGAWA, YUKIO TAKAHATA, RICHARD W. BYRNE, and TAKAYOSHI KANO: A case of Unusuaully Early Postpartum Resumption of Estrous Cycling in a Young Female Chimpanzee in the Wild 517

Book Reviews 521

Note 524